

CONVERTIBLE THREADED COMPRESSION DEVICE  
AND METHOD OF USE

ABSTRACT OF THE DISCLOSURE

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A convertible threaded compression device connects a bone fragment to an anchor bone for a healing duration. The compression device has a distal bone penetration section which is advanced into the bone and a proximal bone exterior section. The proximal bone exterior section is longer than the bone penetration section, and thus extends substantially out of the bone during healing of the bone. The bone penetration section includes a distal bone anchor section which threadingly engages the anchor bone, and a proximal fragment section of smaller diameter. The fragment section fits within the overbore created by advancing the bone anchor section through the bone fragment, and thus extends through but does not positively engage the bone fragment. A compression engagement on a distal end of the bone exterior section provides a compression shoulder. In one embodiment the compression engagement is provided by a threaded compression nut, while in another embodiment the compression engagement is permanent affixed to the bone wire. The shoulder makes substantial contact with an exterior surface of the bone fragment, biasing the bone fragment toward the anchor bone with a controlled compression force. After insertion, a proximal end of the compression device may be cut off to convert it into a fixed length screw device. The compression engagement is further adapted, such as through thread form and/or with a sloped proximal side, to enable the device to be more easily removed from the healed fracture without damaging surrounding tissue.

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